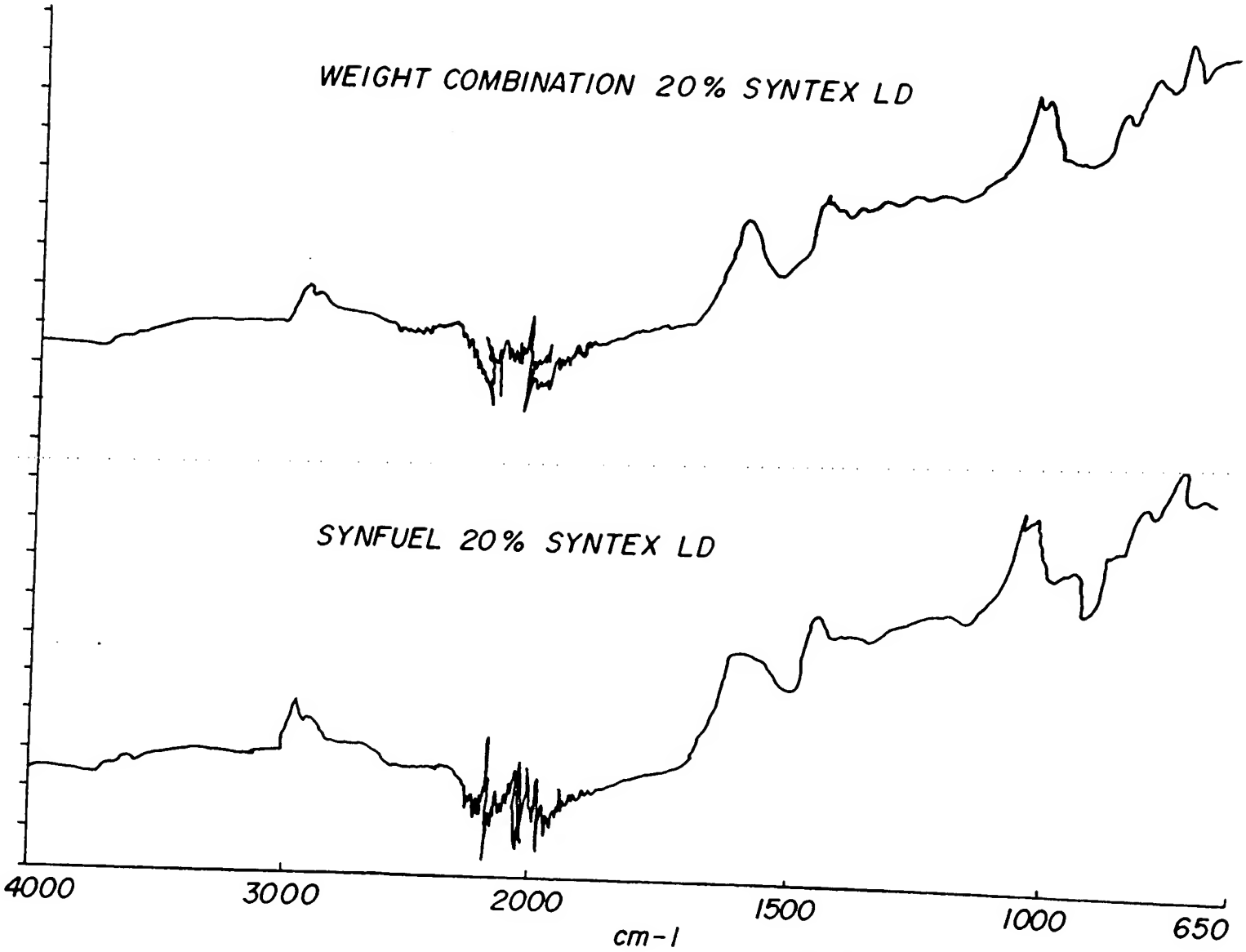
WEIGHT COMBINATION 20% SYNTEX LD
SYNFUEL 20% SYNTEX LD
4000
3000
2000
1500
1000
650
cm-1

FIG. 1

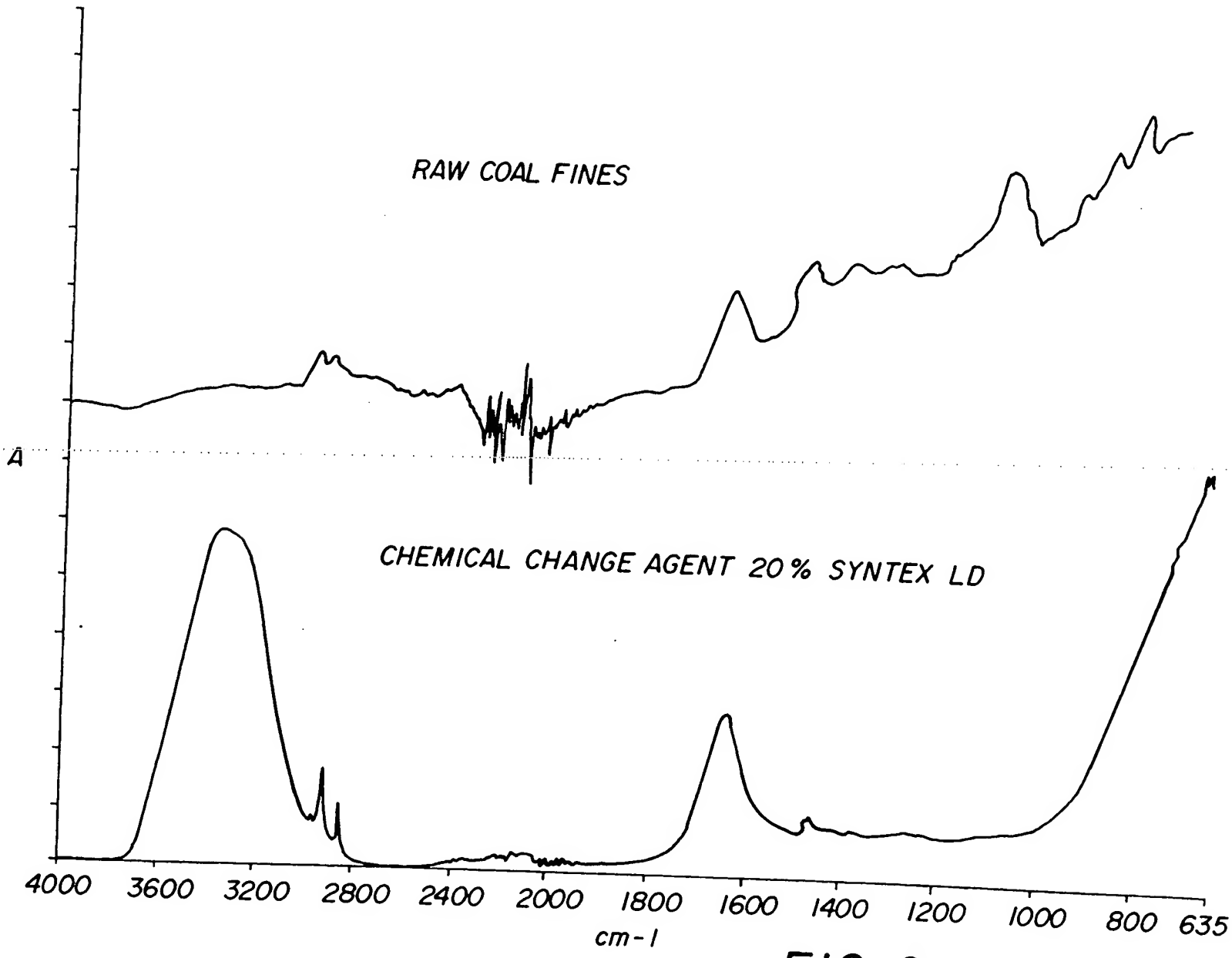
RAW COAL FINES
A
CHEMICAL CHANGE AGENT 20% SYNTEX LD
4000
3600
3200
2800
2400
2000
1800
1600
1400
1200
1000
800
635
cm-1

FIG. 2

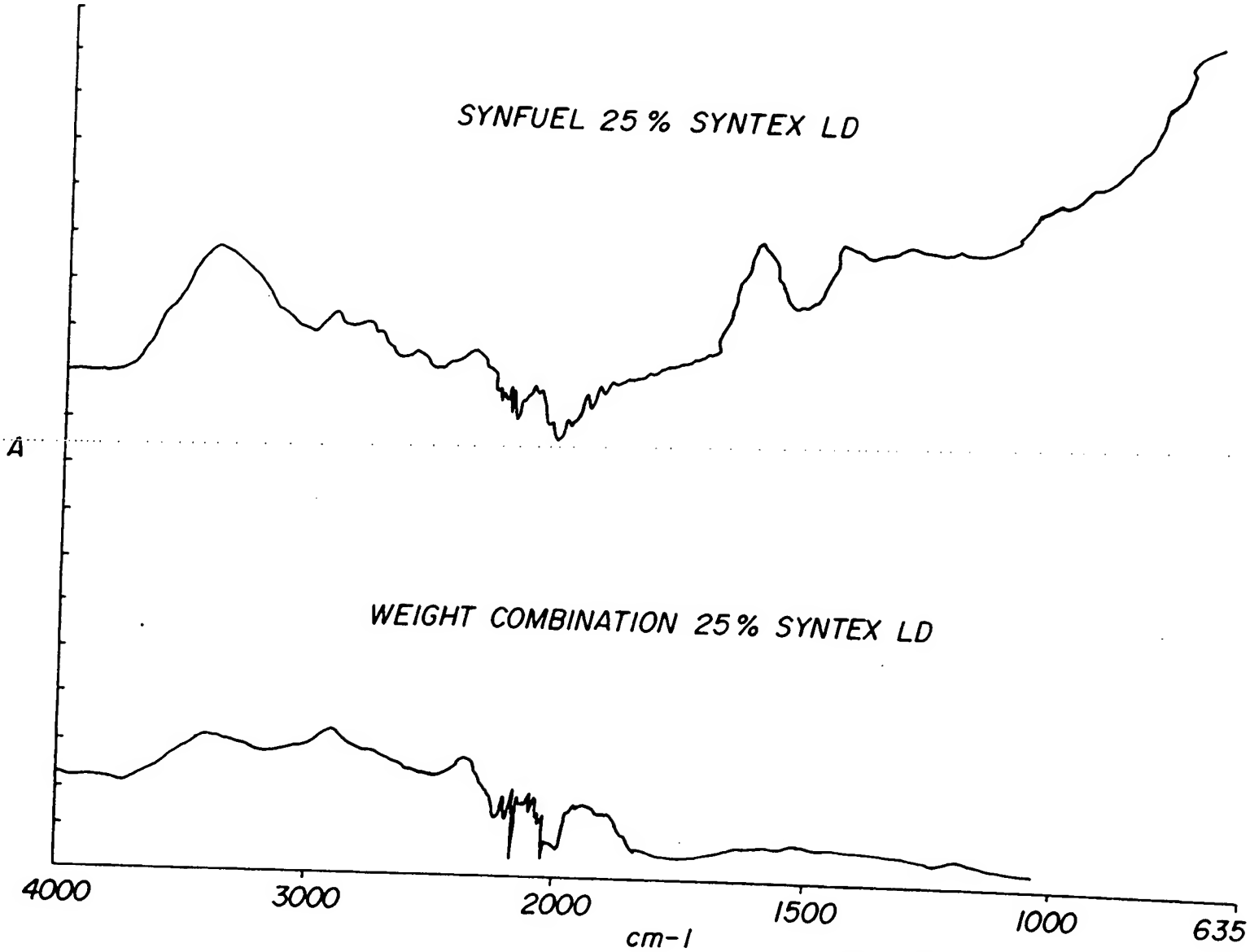
SYNFUEL 25 % SYNTEX LD
A
WEIGHT COMBINATION 25% SYNTEX LD
4000
3000
2000
1500
1000
635
cm-1

FIG. 3

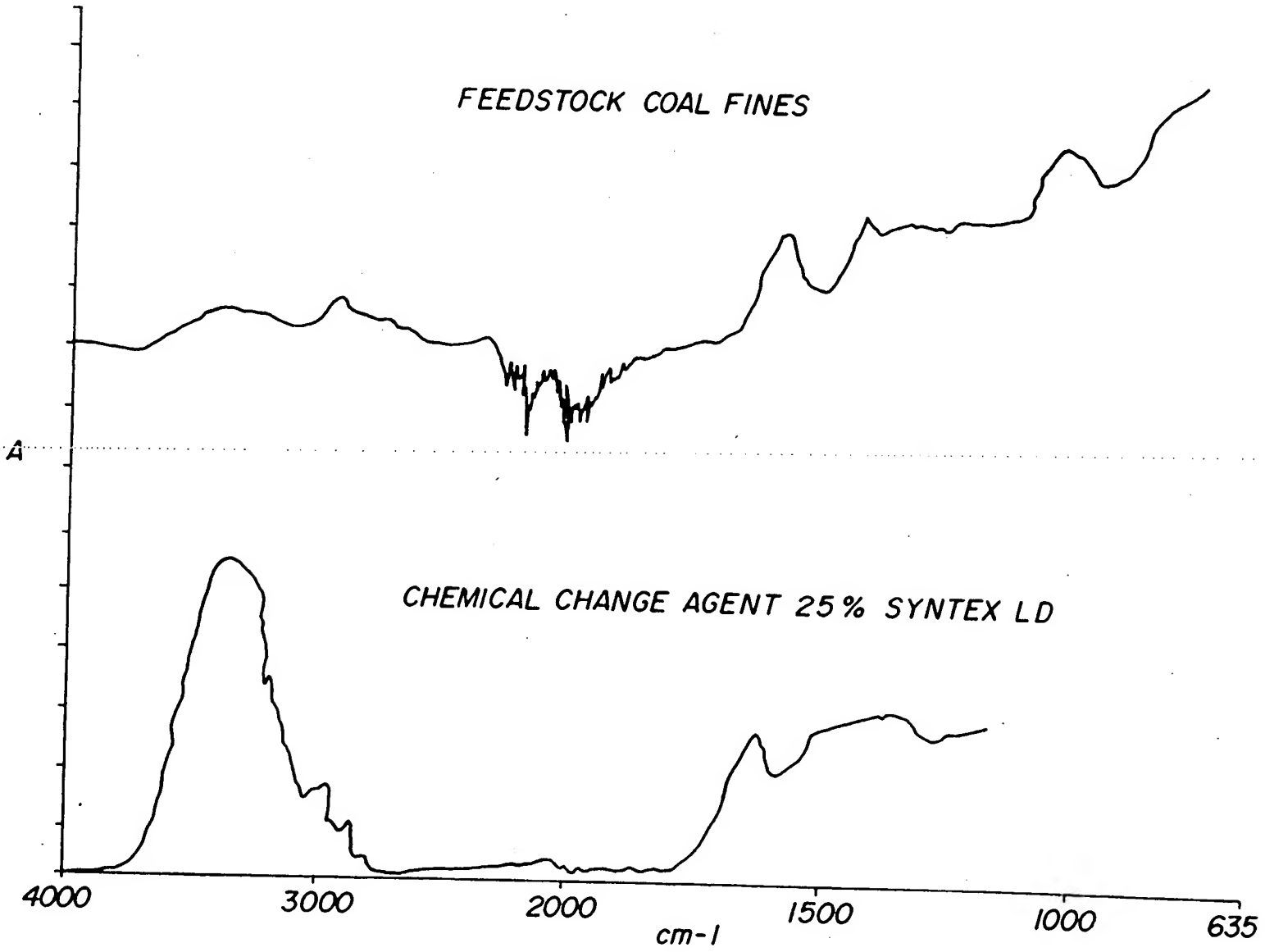
FEEDSTOCK COAL FINES
A
CHEMICAL CHANGE AGENT 25% SYNTEX LD
4000
3000
2000
1500
1000
635
cm-1

FIG. 4

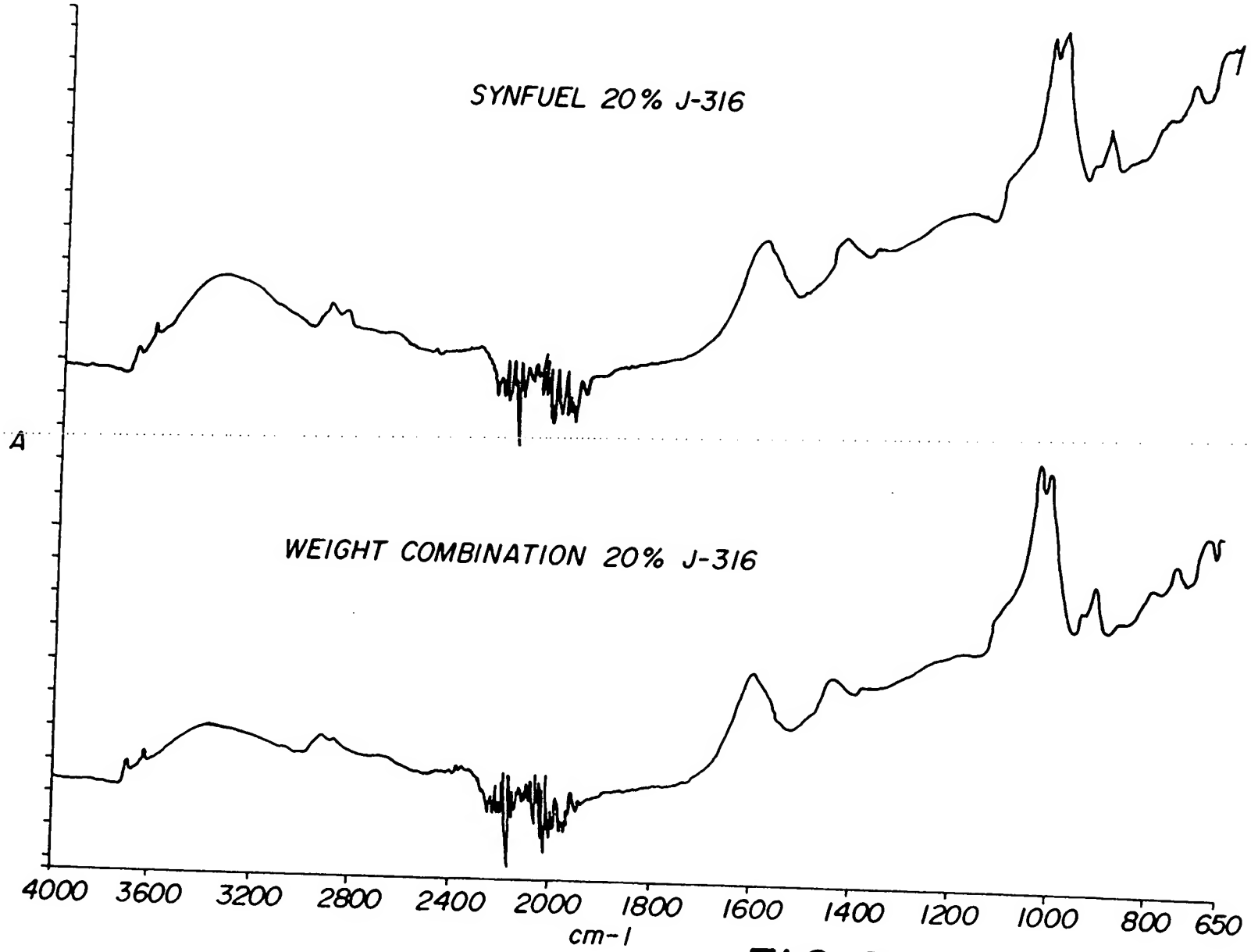
SYNFUEL 20% J-316
A
WEIGHT COMBINATION 20% J-316
4000 3600 3200 2800 2400 2000 1800 1600 1400 1200 1000 800 650
cm-1

FIG. 5

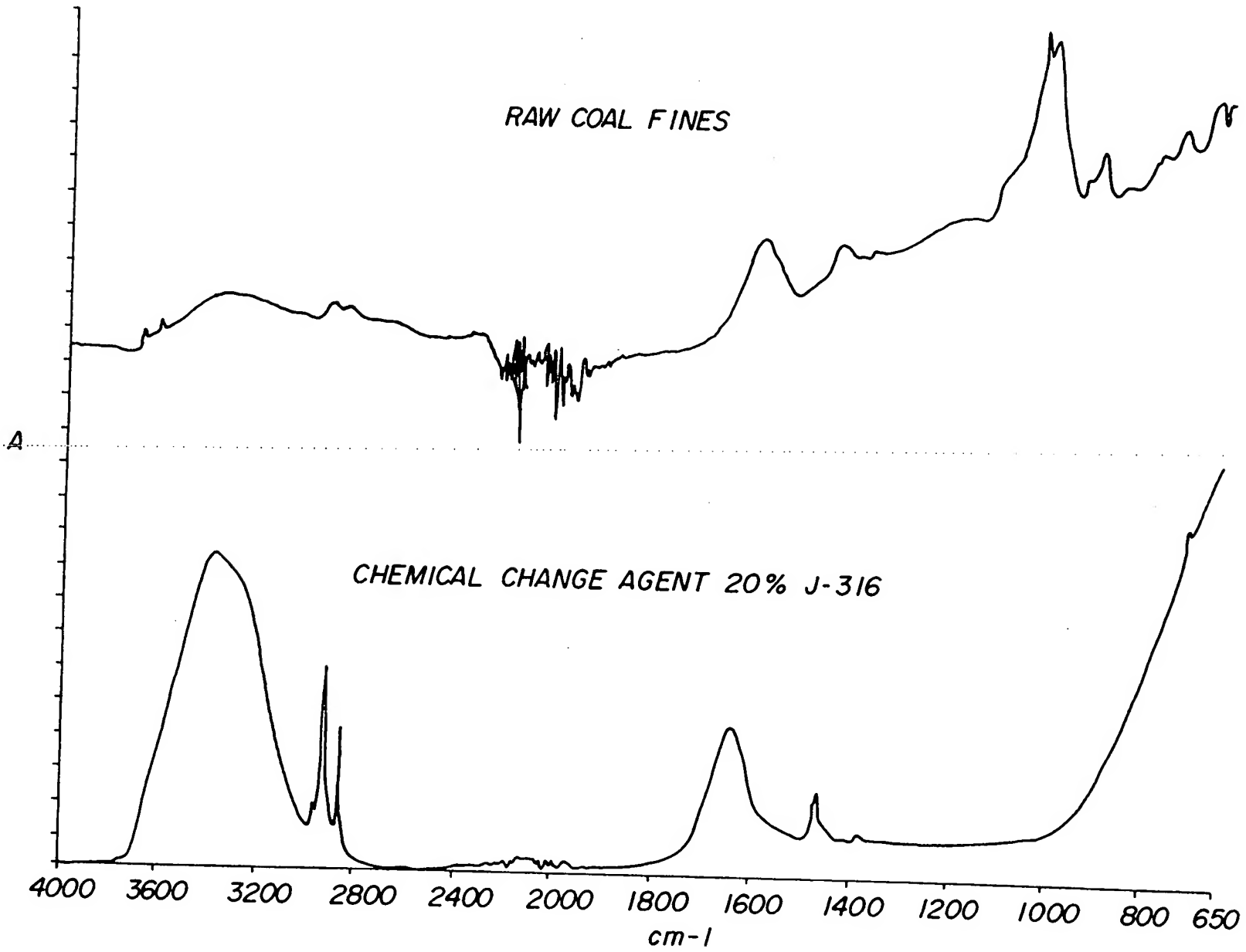
RAW COAL FINES
A
CHEMICAL CHANGE AGENT 20% J-316
4000
3600
3200
2800
2400
2000
1800
1600
1400
1200
1000
800
650
cm-1

FIG. 6

[redacted]

NBP CEM: Hourly Data Summary

[redacted]

Period: 07/16/03 00:00:59 To 07/17/03 23:59:59, Records = 34

Date	Hour	PC	Unit Oper (Hr)	Total Steam klb/hr	Load Bin	NOx Lbs	Heat Input MBtu	NOx lb/mBtu				Stack Flow (scfh)				NOx			CO2			Oper Min.	Fuel Factor
								Adj.	Mthd	Avail	Bias	Adj.	Mthd	Avail	Bias	ppm	MC	Mthd	% CO2	MC	Mthd		
07/16/03 0	0	08	1.00	84	5	0.620	234.0	0.620	01	0.0	1.000	3828000	01	0.0	1.000	317.4	00	01	11.0	00	00	60	1800
07/16/03 0	1	08	1.00	80	5	0.640	225.0	0.640	01	0.0	1.000	3756000	01	0.0	1.000	321.8	00	01	10.8	00	00	60	1800
07/16/03 0	2	08	1.00	79	5	0.687	228.0	0.687	01	0.0	1.000	3864000	01	0.0	1.000	338.9	00	01	10.6	00	00	60	1800
07/16/03 0	3	08	1.00	83	5	0.693	234.0	0.693	01	0.0	1.000	3966000	01	0.0	1.000	341.9	00	01	10.6	00	00	60	1800
07/16/03 0	4	08	1.00	84	5	0.671	238.0	0.671	01	0.0	1.000	3960000	01	0.0	1.000	337.3	00	01	10.8	00	00	60	1800
07/16/03 0	5	08	1.00	81	5	0.722	231.0	0.722	01	0.0	1.000	3960000	01	0.0	1.000	352.9	00	01	10.5	00	00	60	1800
07/16/03 0	6	08	1.00	98	6	0.989	278.0	0.989	01	0.0	1.000	4962000	01	0.0	1.000	464.6	00	01	10.1	00	00	60	1800
07/16/03 0	7	08	1.00	79	5	0.767	214.0	0.767	01	0.0	1.000	3852000	01	0.0	1.000	357.1	00	01	10.0	00	00	60	1800
07/16/03 0	8	08	1.00	78	5	0.656	219.0	0.656	01	0.0	1.000	3798000	01	0.0	1.000	317.4	00	01	10.4	00	00	60	1800
07/16/03 0	9	08	1.00	80	5	0.622	220.0	0.622	01	0.0	1.000	4116000	01	0.0	1.000	277.9	00	01	9.6	00	00	60	1800
07/16/03 1	10	08	1.00	79	5	0.595	223.0	0.595	01	0.0	1.000	4050000	01	0.0	1.000	274.3	00	01	9.9	00	00	60	1800
07/16/03 1	11	08	1.00	80	5	0.577	230.0	0.577	01	0.0	1.000	4020000	01	0.0	1.000	276.6	00	01	10.3	00	00	60	1800
07/16/03 1	12	08	1.00	80	5	0.589	232.0	0.589	01	0.0	1.000	4050000	01	0.0	1.000	282.4	00	01	10.3	00	00	60	1800
07/16/03 1	13	08	1.00	80	5	0.586	235.0	0.586	01	0.0	1.000	4068000	01	0.0	1.000	283.4	00	01	10.4	00	00	60	1800
07/16/03 1	14	08	1.00	79	5	0.594	234.0	0.594	01	0.0	1.000	4098000	01	0.0	1.000	284.8	00	01	10.3	00	00	60	1800
07/16/03 1	15	08	1.00	81	5	0.588	240.0	0.588	01	0.0	1.000	4194000	01	0.0	1.000	281.9	00	01	10.3	00	00	60	1800
07/16/03 1	16	08	1.00	81	5	0.581	253.0	0.581	01	0.0	1.000	4470000	01	0.0	1.000	275.7	00	01	10.2	00	00	60	1800
07/16/03 1	17	08	1.00	80	5	0.598	227.0	0.598	01	0.0	1.000	4050000	01	0.0	1.000	281.1	00	01	10.1	00	00	60	1800
07/16/03 1	18	08	1.00	80	5	0.594	230.0	0.594	01	0.0	1.000	4056000	01	0.0	1.000	282.1	00	01	10.2	00	00	60	1800
07/16/03 1	19	08	1.00	82	5	0.579	235.0	0.579	01	0.0	1.000	4068000	01	0.0	1.000	280.4	00	01	10.4	00	00	60	1800
07/16/03 2	20	08	1.00	81	5	0.588	233.0	0.588	01	0.0	1.000	4068000	01	0.0	1.000	282.0	00	01	10.3	00	00	60	1800
07/16/03 2	21	08	1.00	81	5	0.596	233.0	0.596	01	0.0	1.000	4068000	01	0.0	1.000	285.8	00	01	10.3	00	00	60	1800
07/16/03 2	22	08	1.00	80	5	0.604	232.0	0.604	01	0.0	1.000	4062000	01	0.0	1.000	289.6	00	01	10.3	00	00	60	1800
07/16/03 2	23	08	1.00	79	5	0.589	225.0	0.589	01	0.0	1.000	4014000	01	0.0	1.000	276.7	00	01	10.1	00	00	60	1800
07/17/03 0	0	08	1.00	80	5	0.580	227.0	0.580	01	0.0	1.000	3960000	01	0.0	1.000	277.9	00	01	10.3	00	00	60	1800
07/17/03 0	1	08	1.00	80	5	0.583	230.0	0.583	01	0.0	1.000	3978000	01	0.0	1.000	282.0	00	01	10.4	00	00	60	1800
07/17/03 0	2	08	1.00	79	5	0.592	227.0	0.592	01	0.0	1.000	3972000	01	0.0	1.000	283.6	00	01	10.3	00	00	60	1800
07/17/03 0	3	08	1.00	88	5	0.577	251.0	0.577	01	0.0	1.000	4260000	01	0.0	1.000	284.6	00	01	10.6	00	00	60	1800
07/17/03 0	4	08	1.00	89	5	0.577	255.0	0.577	01	0.0	1.000	4290000	01	0.0	1.000	287.5	00	01	10.7	00	00	60	1800
07/17/03 0	5	08	1.00	82	5	0.607	235.0	0.607	01	0.0	1.000	4068000	01	0.0	1.000	293.6	00	01	10.4	00	00	60	1800
07/17/03 0	6	08	1.00	80	5	0.603	238.0	0.603	01	0.0	1.000	4038000	01	0.0	1.000	297.2	00	01	10.6	00	00	60	1800
07/17/03 0	7	08	1.00	80	5	0.613	252.0	0.613	01	0.0	1.000	4368000	01	0.0	1.000	296.5	00	01	10.4	00	00	60	1800

Fig 7A

PC - Process Codes:

01 - Changing Fuels
02 - Control Equipment Malfunction
03 - Startup
04 - Shutdown
05 - Process Down
06 - Clean Process Equipment
07 - Clean Control Equipment
08 - Normal Operation
09 - Other

MC - Monitoring Codes:

00 - Data Valid
10 - Required Adjustment Not Made
11 - Excess Drift Primary Analyzer
12 - Excess Drift Ancillary Analyzer
13 - Process Down
14 - Recalibration
15 - Preventive Maintenance
16 - Primary Analyzer Malfunction
17 - Ancillary Analyzer Malfunction
18 - Data Handling System Malfunction
19 - Sample Interface Malfunction
20 - Corrective Maintenance
21 - Blowback
22 - Analyzer Under/Over Range
98 - Automatic Calibration
99 - Software Adjust

P75 - Method Codes:

01 - Primary Monitoring System
Greater than 01 indicates the Data Substitution Method used

Report printed on: 07/17/03 10:21:05

Date	Hour	PC	Oper (Hr)	Steam klb/hr	Load Bin	NOx Lbs	Heat Input MBtu	NOx lb/mBtu Adj.	Mthd	Avail	Bias	Stack Flow (scfh) Adj.	Mthd	Avail	Bias	NOx ppm	MC	Mthd	CO2 % CO2	MC	Mthd	Oper Min.	Fuel Factor
07/17/03 0	8	08	1.00	80	5	0.589	222.0	0.589	01	0.0	1.000	3954000	01	0.0	1.000	276.9	00	01	10.1	00	00	60	1800
07/17/03 0	9	08	1.00	81	5	0.587	232.0	0.587	01	0.0	1.000	4098000	01	0.0	1.000	278.4	00	01	10.2	00	00	60	1800
Report Average:				81		0.625	234	0.625				4070118				300.7			10.3				
Report Max Values:				98		0.989	278	0.989				4962000				464.6			11.0				

FIG 7B

PC - Process Codes:

01 - Changing Fuels
02 - Control Equipment Malfunction
03 - Startup
04 - Shutdown
05 - Process Down
06 - Clean Process Equipment
07 - Clean Control Equipment
08 - Normal Operation
09 - Other

MC - Monitoring Codes:

00 - Data Valid
10 - Required Adjustment N
11 - Excess Drift Primary An
12 - Excess Drift Ancillary A
13 - Process Down
14 - Recalibration
15 - Preventive Maintenance
16 - Primary Analyzer Malfunction
17 - Ancillary Analyzer Malfunction
18 - Data Handling System Malfunction
19 - Sample Interface Malfunction
20 - Corrective Maintenance
21 - Blowback
22 - Analyzer Under/Over Range
98 - Automatic Calibration
99 - Software Adjust

P75 - Method Codes:

01 - Primary Monitoring System
Greater than 01 indicates the Data Substitution Method used

Report printed on: 07/17/03 10:21:05

C:\CEMLink eports\s1_Hour751.frx

NBP CEM: Hourly Data Summary

[redacted] [redacted] [redacted]

Period: 07/16/03 00:00:59 To 07/17/03 23:59:59, Records = 34

Date	Hour	PC	Unit Oper (Hr)	Total Steam klb/hr	Load Bin	NOx Lbs	Heat Input MBtu	NOx lb/mBtu				Stack Flow (scfh)				NOx			CO2			Oper Min.	Fuel Factor
								Adj.	Mthd	Avail	Bias	Adj.	Mthd	Avail	Bias	ppm	MC	Mthd	% CO2	MC	Mthd		
07/16/03 0	0	08	1.00	84	5	0.620	234.0	0.620	01	0.0	1.000	3828000	01	0.0	1.000	317.4	00	01	11.0	00	00	60	1800
07/16/03 0	1	08	1.00	80	5	0.640	225.0	0.640	01	0.0	1.000	3756000	01	0.0	1.000	321.8	00	01	10.8	00	00	60	1800
07/16/03 0	2	08	1.00	79	5	0.687	228.0	0.687	01	0.0	1.000	3864000	01	0.0	1.000	338.9	00	01	10.6	00	00	60	1800
07/16/03 0	3	08	1.00	83	5	0.693	234.0	0.693	01	0.0	1.000	3966000	01	0.0	1.000	341.9	00	01	10.6	00	00	60	1800
07/16/03 0	4	08	1.00	84	5	0.671	238.0	0.671	01	0.0	1.000	3960000	01	0.0	1.000	337.3	00	01	10.8	00	00	60	1800
07/16/03 0	5	08	1.00	81	5	0.722	231.0	0.722	01	0.0	1.000	3960000	01	0.0	1.000	352.9	00	01	10.5	00	00	60	1800
07/16/03 0	6	08	1.00	98	6	0.989	278.0	0.989	01	0.0	1.000	4962000	01	0.0	1.000	464.6	00	01	10.1	00	00	60	1800
07/16/03 0	7	08	1.00	79	5	0.767	214.0	0.767	01	0.0	1.000	3852000	01	0.0	1.000	357.1	00	01	10.0	00	00	60	1800
07/16/03 0	8	08	1.00	78	5	0.656	219.0	0.656	01	0.0	1.000	3798000	01	0.0	1.000	317.4	00	01	10.4	00	00	60	1800
07/16/03 0	9	08	1.00	80	5	0.622	220.0	0.622	01	0.0	1.000	4116000	01	0.0	1.000	277.9	00	01	9.6	00	00	60	1800
07/16/03 1	10	08	1.00	79	5	0.595	223.0	0.595	01	0.0	1.000	4050000	01	0.0	1.000	274.3	00	01	9.9	00	00	60	1800
07/16/03 1	11	08	1.00	80	5	0.577	230.0	0.577	01	0.0	1.000	4020000	01	0.0	1.000	276.6	00	01	10.3	00	00	60	1800
07/16/03 1	12	08	1.00	80	5	0.589	232.0	0.589	01	0.0	1.000	4050000	01	0.0	1.000	282.4	00	01	10.3	00	00	60	1800
07/16/03 1	13	08	1.00	80	5	0.586	235.0	0.586	01	0.0	1.000	4068000	01	0.0	1.000	283.4	00	01	10.4	00	00	60	1800
07/16/03 1	14	08	1.00	79	5	0.594	234.0	0.594	01	0.0	1.000	4098000	01	0.0	1.000	284.8	00	01	10.3	00	00	60	1800
07/16/03 1	15	08	1.00	81	5	0.588	240.0	0.588	01	0.0	1.000	4194000	01	0.0	1.000	281.9	00	01	10.3	00	00	60	1800
07/16/03 1	16	08	1.00	81	5	0.581	253.0	0.581	01	0.0	1.000	4470000	01	0.0	1.000	275.7	00	01	10.2	00	00	60	1800
07/16/03 1	17	08	1.00	80	5	0.598	227.0	0.598	01	0.0	1.000	4050000	01	0.0	1.000	281.1	00	01	10.1	00	00	60	1800
07/16/03 1	18	08	1.00	80	5	0.594	230.0	0.594	01	0.0	1.000	4056000	01	0.0	1.000	282.1	00	01	10.2	00	00	60	1800
07/16/03 1	19	08	1.00	82	5	0.579	235.0	0.579	01	0.0	1.000	4068000	01	0.0	1.000	280.4	00	01	10.4	00	00	60	1800
07/16/03 2	20	08	1.00	81	5	0.588	233.0	0.588	01	0.0	1.000	4068000	01	0.0	1.000	282.0	00	01	10.3	00	00	60	1800
07/16/03 2	21	08	1.00	81	5	0.596	233.0	0.596	01	0.0	1.000	4068000	01	0.0	1.000	285.8	00	01	10.3	00	00	60	1800
07/16/03 2	22	08	1.00	80	5	0.604	232.0	0.604	01	0.0	1.000	4062000	01	0.0	1.000	289.6	00	01	10.3	00	00	60	1800
07/16/03 2	23	08	1.00	79	5	0.589	225.0	0.589	01	0.0	1.000	4014000	01	0.0	1.000	276.7	00	01	10.1	00	00	60	1800
07/17/03 0	0	08	1.00	80	5	0.580	227.0	0.580	01	0.0	1.000	3960000	01	0.0	1.000	277.9	00	01	10.3	00	00	60	1800
07/17/03 0	1	08	1.00	80	5	0.583	230.0	0.583	01	0.0	1.000	3978000	01	0.0	1.000	282.0	00	01	10.4	00	00	60	1800
07/17/03 0	2	08	1.00	79	5	0.592	227.0	0.592	01	0.0	1.000	3972000	01	0.0	1.000	283.6	00	01	10.3	00	00	60	1800
07/17/03 0	3	08	1.00	88	5	0.577	251.0	0.577	01	0.0	1.000	4260000	01	0.0	1.000	284.6	00	01	10.6	00	00	60	1800
07/17/03 0	4	08	1.00	89	5	0.577	255.0	0.577	01	0.0	1.000	4290000	01	0.0	1.000	287.5	00	01	10.7	00	00	60	1800
07/17/03 0	5	08	1.00	82	5	0.607	235.0	0.607	01	0.0	1.000	4068000	01	0.0	1.000	293.6	00	01	10.4	00	00	60	1800
07/17/03 0	6	08	1.00	80	5	0.603	238.0	0.603	01	0.0	1.000	4038000	01	0.0	1.000	297.2	00	01	10.6	00	00	60	1800
07/17/03 0	7	08	1.00	80	5	0.613	252.0	0.613	01	0.0	1.000	4368000	01	0.0	1.000	296.5	00	01	10.4	00	00	60	1800

FIG 8

PC - Process Codes:

01 - Changing Fuels
02 - Control Equipment Malfunction
03 - Startup
04 - Shutdown
05 - Process Down
06 - Clean Process Equipment
07 - Clean Control Equipment
08 - Normal Operation
09 - Other

MC - Monitoring Codes:

00 - Data Valid
10 - Required Adjustment Not Made
11 - Excess Drift Primary Analyzer
12 - Excess Drift Ancillary Analyzer
13 - Process Down
14 - Recalibration
15 - Preventive Maintenance
16 - Primary Analyzer Malfunction
17 - Ancillary Analyzer Malfunction
18 - Data Handling System Malfunction
19 - Sample Interface Malfunction
20 - Corrective Maintenance
21 - Blowback
22 - Analyzer Under/Over Range
98 - Automatic Calibration
99 - Software Adjust

P75 - Method Codes:

01 - Primary Monitoring System
Greater than 01 indicates the Data Substitution Method used

Report printed on: 07/17/03 10:21:05

Benefuel Product Performance
Coal Based Synfuel

Produced by Chemical Change Reagent J-316
Pulverized Coal-Fired Boiler
0.92% Application Rate July 2003

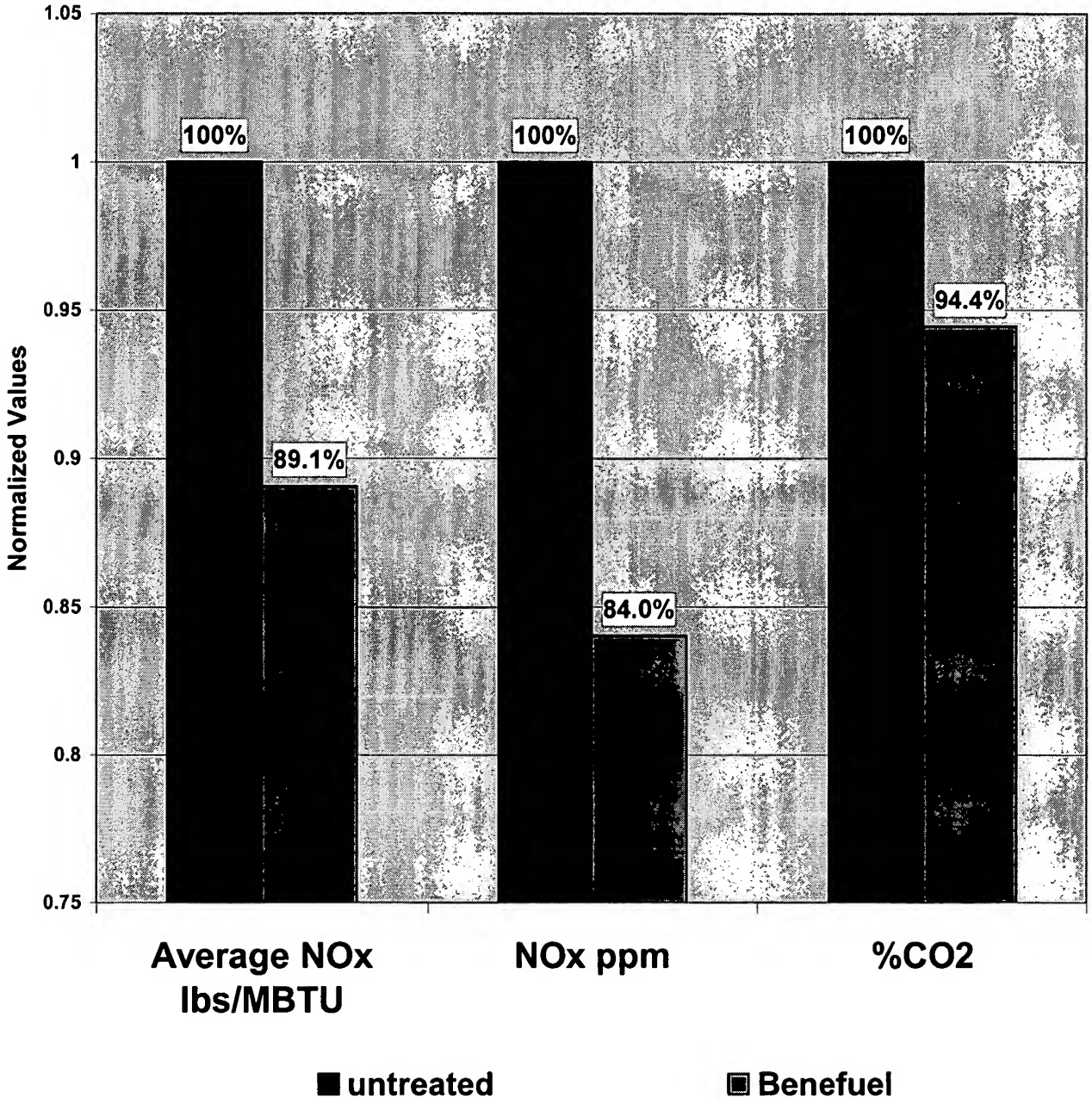

Fig 9

Benefuel Product Performance

Coal Based Synfuel

Produced by Chemical Change Reagent J-316

Pulverized Coal-Fired Boiler Low NOX Burner

0.92% Application Rate November 2003

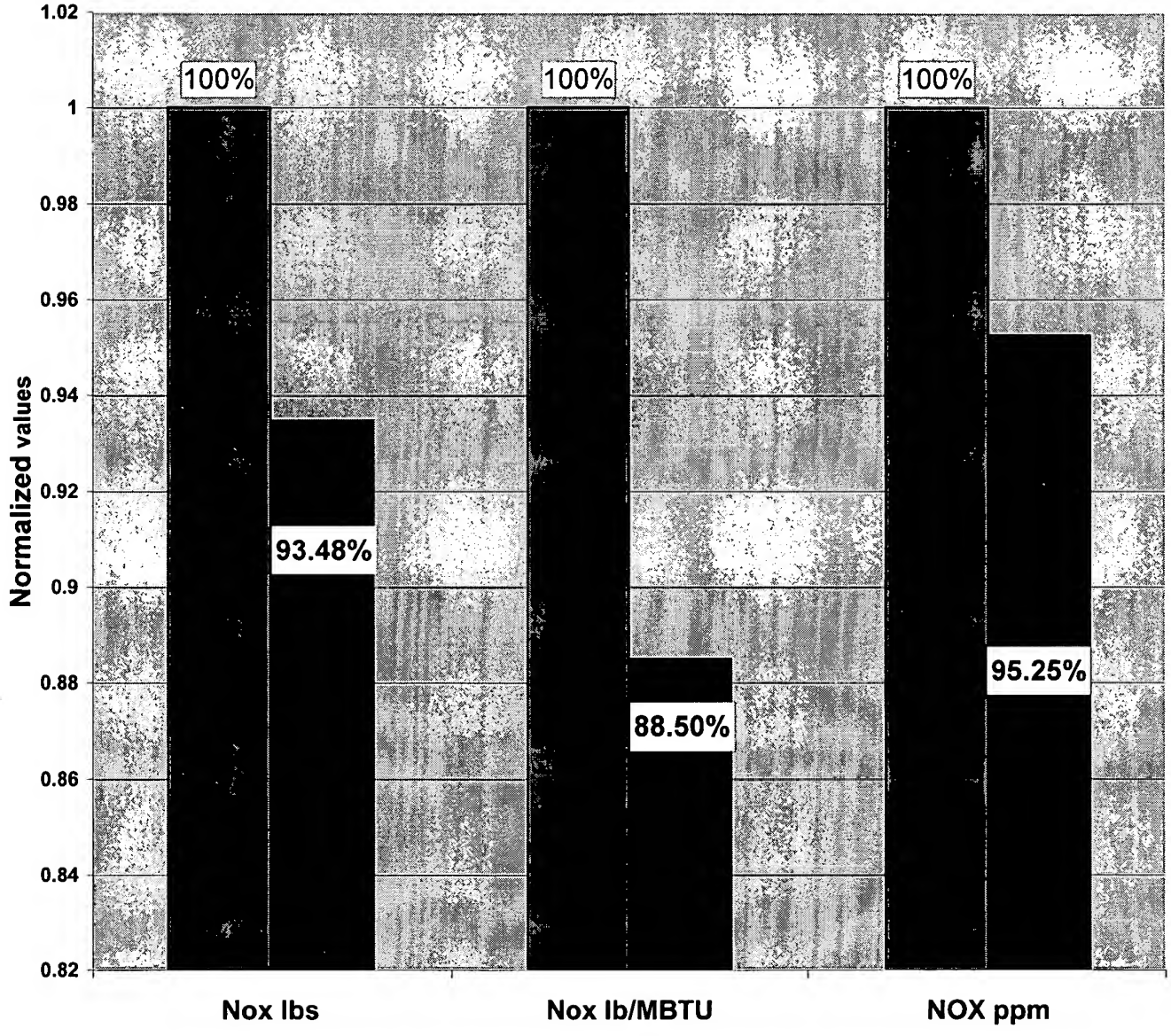

Fig 10

Table I.

Test	Burner	Tons of Coal Treated	Treatment Location	Application Rate	Benefuel Product
July 2003	Standard	136	Utility plant coal yard	0.8 wt%	67%
November 2003	Low-NOx	400	Norton, VA	0.9 wt%	53%

Fig 11

Table II

Data Set	Average Steam Generated k lb/hr	Average NOx lbs/MBTU	Average Heat Input MBTU/hr	Stack Flow SCFH	NOx ppm	% CO2	Average Coal Consumption Tons/hr
Control	82.0	0.662	232	3874800	332	10.8%	9.7
Benefuel	80.2	0.590	233	4091857	279	10.2%	9.7
Change %	-2.20%	-10.95%	0.43%	5.60%	-15.96%	-5.56%	0.00%

Fig 12

Figure 1.

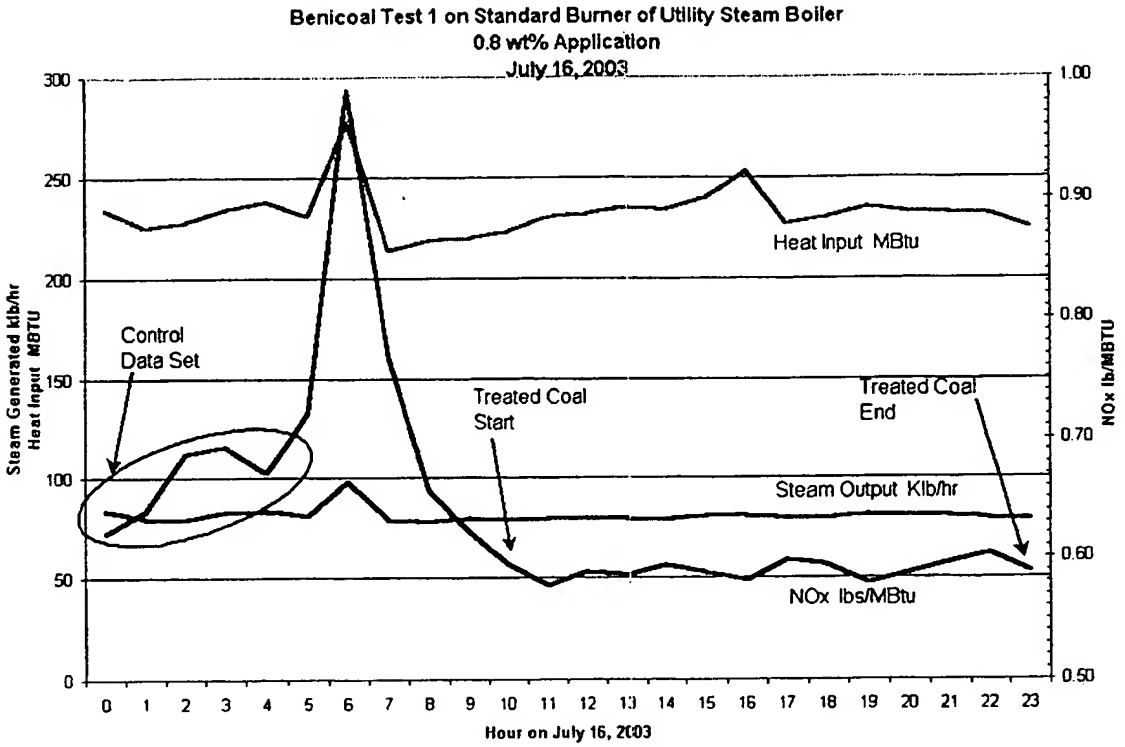

Fig 13

Table III

Data Set	Average Steam Generated k lb/hr	Average NOx lbs/MBTU	Average Heat Input MBTU/hr	Stack Flow SCFH	NOx ppm	% CO2	Average Coal Consumption Tons/hr
Untreated	110.4	0.426	160.74	2739600	209.4	10.6	6.5
Treated	117	0.377	169.75	2686500	199.5	11.4	6.9
	5.6%	-12.9%	5.3%	-2.0%	-5.0%	7.2%	5.3%

Fig 14